EXECUTIVE SUMMARY

National concern during the past decade about the adequacy of the American educational system's ability to prepare young people for successful careers has led to several important new federal initiatives. Among these are the Tech-Prep Education Act, included in the 1990 amendments to the Carl D. Perkins Vocational Education Act, and the more recent School-to-Work Opportunities Act of 1994 (STWOA). Both initiatives were designed to improve the knowledge, skills, and employment preparation of American youths by stimulating state and local reform efforts. The two laws promote some similar practices that involve many of the same local partners; in fact, the STWOA encourages communities to build school-to-work systems by extending or enhancing existing programs, including Tech-Prep.

However, STWOA funding is intended to support initiatives that are broader than traditional Tech-Prep programs, including additional components and groups of students. This objective, anticipated to some extent by Tech-Prep practitioners, has begun shifting Tech-Prep implementation efforts in some communities toward the school-to-work model, according to informal discussions with state and local Tech-Prep coordinators. Thus, information about current Tech-Prep efforts can provide early insights into the effects of the STWOA at the local level.

This report assesses the implementation status of key school-to-work features in Tech-Prep communities in 1994, using data from annual surveys of Tech-Prep consortia. The surveys are being conducted by Mathematica Policy Research, Inc. as part of the national Evaluation of the Tech-Prep Education Program for the U.S. Department of Education (ED). The survey questionnaire administered to all local consortia beginning in 1993 includes items on school-to-work components, both because there is overlap in some elements between the two initiatives and because ED requested the inclusion of particular questions to provide a more comprehensive picture of early school-to-work implementation and issues in Tech-Prep communities.

Data from the Tech-Prep surveys are particularly relevant for assessing early national school-to-work progress, because they illustrate reform activity in a substantial number of communities around the country. The close to 1,000 Tech-Prep consortia operating in 1994 included more than half of all U.S. school districts and three-quarters of all U.S. secondary students. Moreover, most two-year community and technical colleges, as well as a growing number of four-year institutions, are members of Tech-Prep consortia. High response rates to the Tech-Prep surveys in both 1993 and 1994, and the significant "coverage" of consortia, provide a credible, national picture of school-to-work implementation within the Tech-Prep framework.

Several findings can be drawn from the survey data about the extent to which Tech-Prep communities were developing school-to-work components in 1994, how implementation had expanded since 1993, and the types of approaches consortia used. Key points are summarized below.

SCHOOL-BASED LEARNING

Tech-Prep programs of study may help facilitate the creation of career major options in school-to-work systems

Encouraging students to choose and follow a sequence of challenging, integrated academic and occupational courses that prepares them for an identified career is an important element of both school-to-work and Tech-Prep. Tech-Prep programs of study could conceivably be the basis for expanding into systems of well-defined career majors, if they are widely implemented as coherent course sequences focused on broad industry or occupational clusters.

The survey data suggest that in 1994, prospects for developing meaningful school-to-work career majors based on Tech-Prep programs are promising but somewhat uncertain:

- Many consortia--more than two-thirds, and in a total of 2,748 districts--reported offering some type of program of study to guide students' coursetaking
- Expansion in the reported use of programs of study has been somewhat limited; the same proportion of consortia implemented them in 1993 and 1994, and fewer than one third offered them in more districts in 1994
- The definition of Tech-Prep programs of study or career clusters varies significantly; some proportion of them are similar to the career major concept promoted by the STWOA, but at least 20 percent of consortium programs--and probably more-- are too narrowly-focused to qualify as career majors or reflect only a casual translation of students' career interests into course selections

Tech-Prep has helped introduce some forms of integrated academic curricula, but implementation is currently limited

As a result of Tech-Prep, some schools are already using academic curricula that emphasize applied or contextual learning--one form of academic and vocational integration on which school-to-work systems can be built. However, the Tech-Prep data suggest that communities still have a long way to go before implementing applied academic curricula systemwide:

- More than 90 percent of all consortia have introduced applied academic curricula in the past two or three years that were either developed at the state or local level, or, more commonly, purchased from commercial vendors
- New applied curricula are available in a relatively small proportion of schools and in a limited number of classes; for example, in consortia that report using the most popular of the commercially available curricula, they were doing so in only slightly more than a third of their secondary schools, and locally- or state-developed applied curricula are even less widespread.

Many postsecondary institutions are already involved in articulation efforts with secondary schools

Two-year colleges that join school-to-work partnerships will most likely bring with them a familiarity with secondary-postsecondary articulation and a set of valuable institutional relationships:

- By fall 1994, close to 90 percent of Tech-Prep consortia had signed articulation agreements between local secondary and postsecondary institutions

- Consortia with signed articulation agreements reported a total of 1,300 postsecondary institutions as partners in these agreements. This figure represents nearly all of the two-year institutions that were members of these consortia and suggests that Tech-Prep has affected most of the nation's community colleges

Industry-recognized skill certificates, as encouraged under the STWOA, have so far not been widely adopted

Unlike other components of the school-to-work model, skill certificates were never emphasized in the Tech-Prep legislation. It is not surprising that, in fall 1994, relatively few consortia had a process for assessing particular skills and recording the attainment of these skills on a certificate that could be used to document qualifications for potential employers. The data indicate that:

- About one third of all consortia reported awarding skill certificates in at least one of their consortium schools

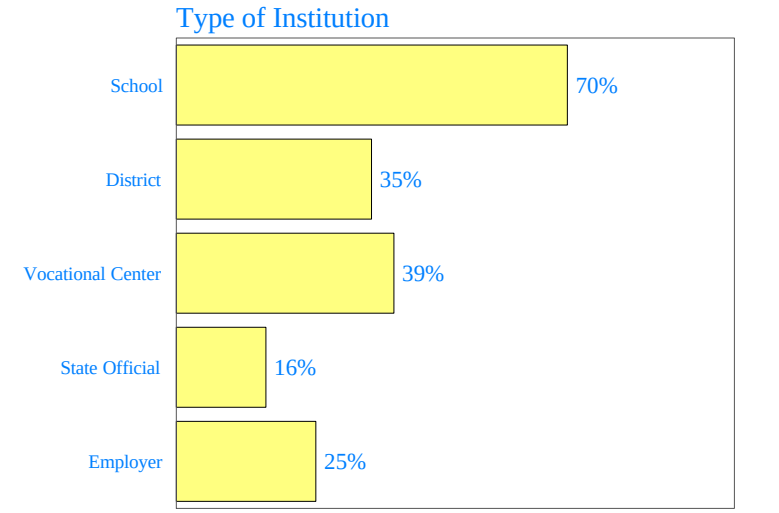
- Certificates are most frequently awarded at the secondary level, which suggests that school-to-work activity is currently focusing on high schools and that many of the skill certificates reported by Tech-Prep consortia may be no different from those given to secondary vocational course completers in some communities

- Technical competencies and program completion are the most common outcomes documented in skill certificates

- Employers are relatively seldom involved in certifying students' mastery of skills, providing even stronger evidence that the skill certificates Tech-Prep consortia award may be associated with traditional vocational education completion rather than with more comprehensive work-based learning programs, in which employer assessment and input are considered critical (Figure 1)

FIGURE 1

APPROVAL RESPONSIBILITY FOR SKILL CERTIFICATES



SOURCE: Inventory of Local Tech-Prep Planning and Implementation, fall 1994.

WORK-BASED LEARNING

Access to workplace experiences has increased

The emphasis in the STWOA on workplace experiences is probably contributing to changes in Tech-Prep implementation:

- A higher proportion of consortia made workplace activities available for Tech-Prep students in 1994 (72 percent) than in 1993 (63 percent); those that offered workplace activities in both 1993 and 1994 did so in a somewhat higher proportion of districts in 1994 (60 percent) than in 1993 (56 percent)

- Availability was still limited to only a subset of consortium districts, however; for example, half of all consortia in fall 1994 (434) reported that paid part-time, school-year employment was available to Tech-Prep and other students, but these experiences were offered in only 42 percent of these consortia's districts (1,540 districts out of 3,650)

Full documentation of student participation in workplace experiences is relatively rare

Evidence from the fall 1994 survey underscores consortia's current difficulty in collecting information on the number of Tech-Prep students in workplace activities and portends obstacles school-to-work partnerships will probably face:

- Only 28 percent of the 619 consortia that reported making workplace experiences available for Tech-Prep students were able to record consistently the number of participants in those activities during the 1993-1994 school year

- Even consortia that could document Tech-Prep students' workplace participation could do so in fewer than one third of their consortium districts

Tech-Prep students participated in various workplace activities but visits to work sites were the most common

A variety of activities are considered work-based learning opportunities in the STWOA, and Tech-Prep students appear to have participated to some extent in most of them (Figure 2):

- More Tech-Prep students were involved in work-site visits than any other type of workplace experience; 23,832 Tech-Prep participants from 144 consortia visited at least one employer's work site during the 1993-1994 school year

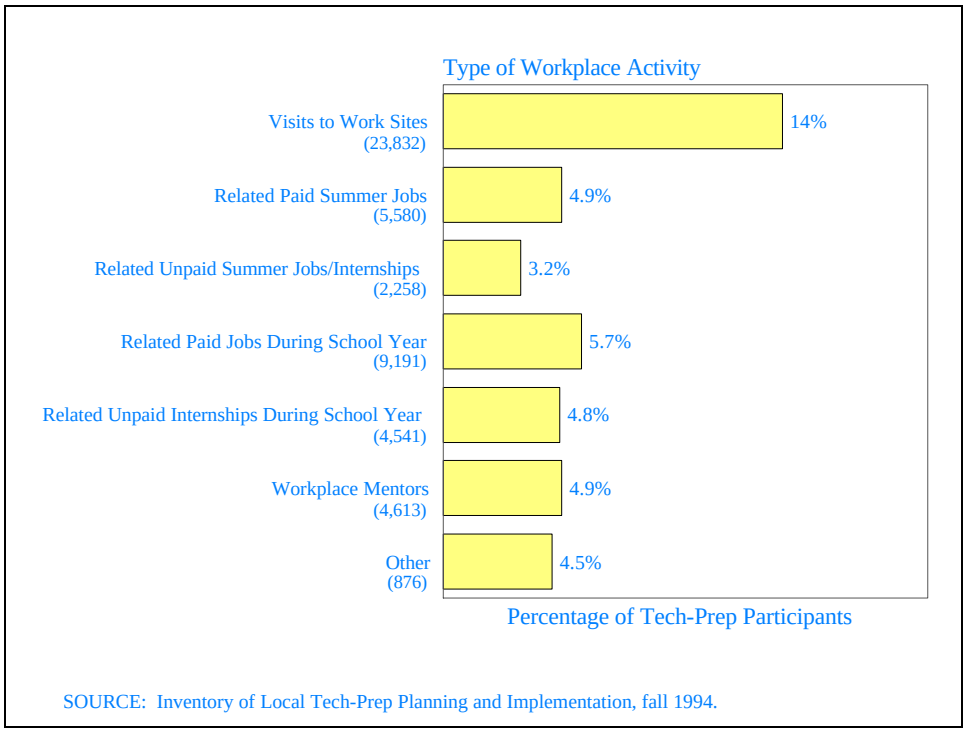
- Paid part-time jobs or internships, which could include jobs associated with cooperative education, work-study, or youth apprenticeship programs during the school year, were the second most common type of workplace activity for Tech-Prep students

Only a small fraction of Tech-Prep students are so far involved in any workplace activity

Many practitioners believe Tech-Prep has the potential to provide a framework for developing school-to-work systems, according to informal discussions with state and local coordinators. To achieve this potential, Tech-Prep programs would have to expand the number of participants and systematically involve the majority of students in work-based learning. The survey data suggest that, at least in 1994, Tech-Prep consortia were quite far from achieving such widespread workplace activity. Among consortia that reported on Tech-Prep involvement in workplace activities, the proportion of Tech-Prep students who participated in these activities was quite small (Figure 2). The largest group of Tech-Prep students (14 percent) was involved in visits to employer work sites. Fewer than five percent of Tech-Prep students had summer or school-year jobs related to their school-based occupational program. Since Tech-Prep participants represent only a fraction of all students, and the STWOA envisions broad participation in workplace activity for students in general, increasing the scale of workplace activity for STW systems remains a substantial challenge.

FIGURE 2

NUMBER AND PROPORTION OF TECH-PREP PARTICIPANTS IN SPECIFIED WORKPLACE ACTIVITIES, 1993-1994 SCHOOL YEAR



SOURCE: Inventory of Local Tech-Prep Planning and Implementation, fall 1994.

COLLABORATION AND CONNECTING ACTIVITIES

Many Tech-Prep consortia include the broad membership the STWOA promotes

Tech-Prep consortia in some communities already include institutions and organizations that go beyond the narrow consortium definition in the legislation and approximate the broad coalitions the STWOA encourages. Although Tech-Prep consortia are only required to include secondary agencies and two-year degree- or certificate-granting postsecondary institutions, many include four-year colleges, businesses, trade associations, and labor groups:

- More than 40 percent of consortia include a four-year college as a member
- Nearly three-quarters of consortia included at least one employer as a member in 1994; local business/industry associations or trade groups, including chambers of commerce, are reportedly members of close to two-thirds of all consortia
- About one-quarter of consortia include labor groups (unions).

These levels of participation in Tech-Prep consortia by entities the STWOA requires do not suggest that all consortia could currently be considered school-to-work partnerships as defined in the

STWOA. The reported growth of business, industry, and labor membership in Tech-Prep consortia does, however, suggest a response to the expectations of the STWOA. Between 1993 and 1994, both the percentage of consortia that included these groups as members and the total number of these groups participating increased.

Few Tech-Prep communities received STWOA grants for school-to-work system development in 1994

Responses from local Tech-Prep coordinators suggest that some Tech-Prep consortia or subsets of their member districts received STWOA grants for use in the 1994-1995 school year:

- A total of 191 consortia--22 percent of all consortia--reported receiving a STWOA grant by January 1995 that covered all or some of their member districts

- STWOA grants received by consortium members came from direct local grants, state implementation grants, and development grants; 22 consortia reported that their grants had come directly from the national School-to-Work Office, 84 were in the eight states with state implementation grants at that time, and the remaining 85 consortia most likely were awarded funds under their state's development grant

Most early STWOA grants went to school-to-work partnerships whose composition was not aligned with the local Tech-Prep consortium

Direct correspondence between school-to-work partnerships and Tech-Prep consortia appears to have been limited in the first year of STWOA funding, at least with regard to school district membership:

- Nearly 62 percent of the 191 consortia with STWOA funding in fall 1994 reported that school-to-work grants covered only a subset of their consortium districts

- The remaining 38 percent reported that all of their consortium districts were included in a STWOA grant, but the school-to-work grant may have been awarded to an entity that was larger than the Tech-Prep consortium; thus, 38 percent is an upper-bound estimate of the proportion of consortia that in 1994 were identical to STWOA-funded partnerships in terms of district membership

- Overall, among the consortia that received STWOA grants, only about 20 percent of their districts (549 out of 2,568) were covered by those grants

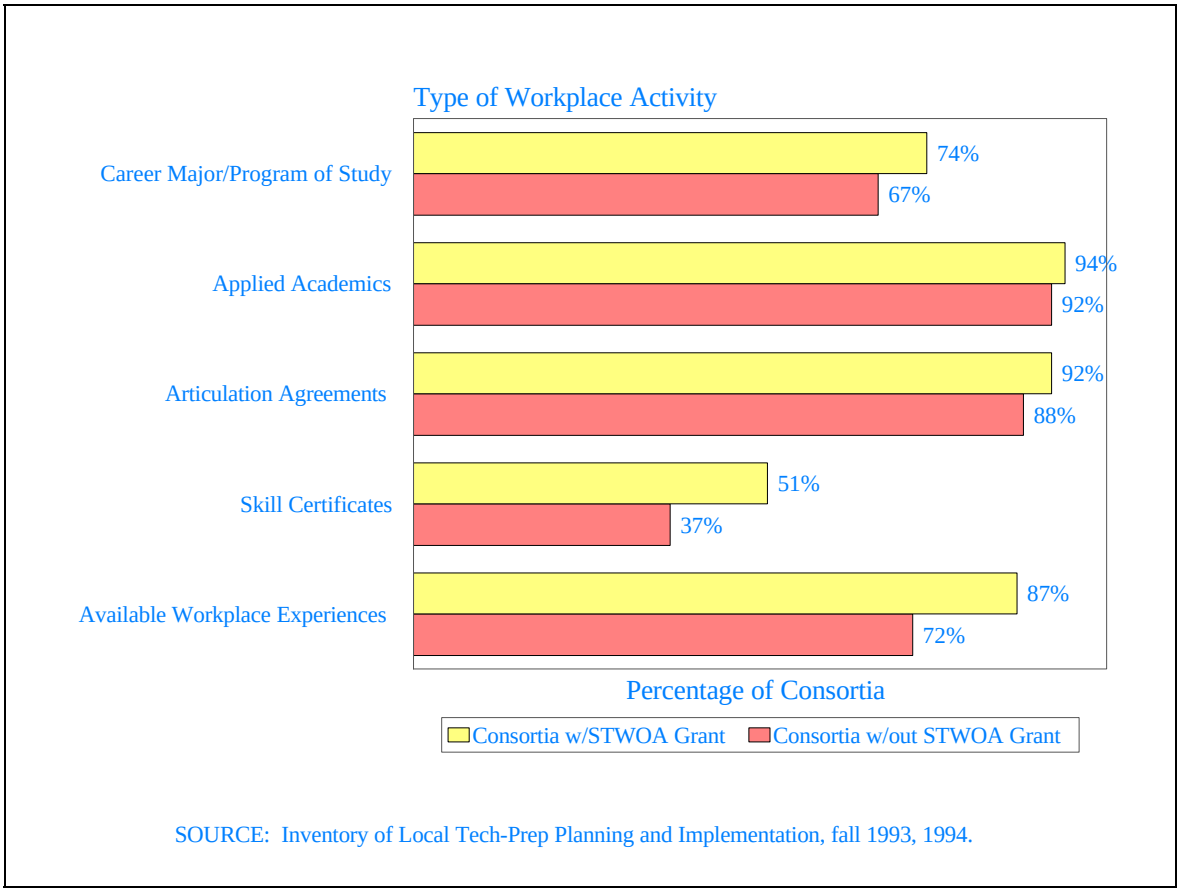
These early signs of organizational distinctions between Tech-Prep and school-to-work at the local level may be a sign of one potential challenge in building STW systems on a Tech-Prep foundation. Substantial efforts may be required to integrate Tech-Prep and STW, particularly where the two initiatives rest on different local alliances.

Consortia with first year STWOA funds were more likely to be implementing key school-to-work and Tech-Prep components than other consortia

Consortia that received early STWOA grants covering at least some of their member districts were more advanced than other consortia. These 191 consortia were more likely to make available career-focused programs of study, academic curricula emphasizing applied learning, articulation agreements, and particularly skill certificate and workplace experiences (Figure 3). These data confirm that both the national School-to-Work Office and state agencies awarded STWOA grants competitively--that is, early funding was given to communities that had demonstrated some experience with important school-to-work elements. The data also suggest that an early start on Tech-Prep development may have been a factor in those awards; consortia with STWOA grants in 1994 were much more likely to have been funded by Title III-E beginning in FY 1992 than in later years.

FIGURE 3

IMPLEMENTATION OF KEY SCHOOL-TO-WORK FEATURES AMONG TECH-PREP CONSORTIA, WITH AND WITHOUT STWOA GRANTS



SOURCE: Inventory of Local Tech-Prep Planning and Implementation, fall 1993, 1994.